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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,103	12/29/2003	Michael Gordon	BWC-106US	6931
23122	7590	06/24/2005		
RATNERPRESTIA P O BOX 980 VALLEY FORGE, PA 19482-0980			EXAMINER WALBERG, TERESA J	
			ART UNIT	PAPER NUMBER
			3753	
DATE MAILED: 06/24/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/748,103

Applicant(s)

GORDON ET AL.

Examiner

Teresa J. Walberg

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/29/03
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_

### DETAILED ACTION

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because it is longer than 150 words. Correction is required. See MPEP § 608.01(b).

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 25-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Evans (2,658,728).

With respect to claim 32, Evans discloses a method of making a water heater including inserting a metallic inner tube (12) within a metallic outer tube (13) to form a double-walled heat exchange tube (see Figure) and positioning the

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heat exchange tube in a tank (1) having a wall (7) defining an interior for holding water such that the end portions of the outer tube (13) are within the interior of the tank and end portions of the inner tube (12) extend through the wall (7) of the tank.

With respect to claims 25-31, Evans discloses a water heater including a tank (1) having a wall (7) defining an interior for holding water, and a double-walled heat exchange tube (see Figure) including a metallic inner tube within a metallic outer tube (13) defining an elongated passageway between the inner and outer tubes to facilitate flow of fluid, the parts being connected together by welding (col. 1, line 55 and col. 2, lines 10, 42-43, and 47). Parts 7, 8, 10, and 16 of Evans can be considered to be a fitting extending into the interior of the tank (1), welded to the inner tubes (12), the outer tubes (13), and the tank (1), forming an annular passageway defined by a space between an inner surface of the fitting and the outer surface of the inner tube (12), the passageway including an aperture (16) located at a perpendicular angle (see the Figure) to the inner tube.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plummer (GB 804,592) in view of Evans (2,658,728).

Plummer discloses a water heater (page 2, lines 91-92) including a tank having a wall defining an interior for holding water (Fig. 3), a heat exchange assembly positioned within the interior, the heat exchange assembly including a metallic (page 2, line 92-96) outer tube (4) within the tank, a metallic (page 2, line 92-96) inner tube (2) extending within the outer tube (4), a portion of the outer surface of the inner tube contacting a portion of the inner surface of the outer tube (page 2, line 60), and an elongated spiral passageway being defined between the inner and outer tubes (page 1, lines 31-35). The tubes may be joined by compressing the outer tube or expanding the inner tube (page 1 lines 45-46 or page 2 lines 45-61). The spiral passageway may be formed in the surface of the inner or outer tube (page 2 lines 73-80).

With respect to claims 4 and 11, while Plummer does not discuss the relative thicknesses of the inner and outer tubes, it would have been obvious to make one thicker than the other to enable machining the thicker one to form the grooves.

While Plummer does not teach the inner tube having end portions extending through a wall of the tank, Evans discloses a water heater including a metallic inner tube (12) within a metallic outer tube (13) positioned within a tank (1) having a wall (7) defining an interior for holding water such that the end

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portions of the outer tube (13) are within the interior of the tank and end portions of the inner tube (12) extend through the wall (7) of the tank.

It would have been obvious in view of Evans to position end portions of the inner tube to extend through a wall of the tank in the water heater of Plummer, the motivation being to reduce the risk of the heat transfer material leaking into the water that is being heated.

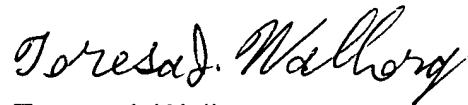
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Whittell and Avery are cited to show pipe fittings. Thamasett et al and Roffelsen are cited to show leak detection for tubes. North, Smith, Doucette et al, Bowden, Sulzberger, and Hackethal (France 1,499,286) are cited to show heat exchangers using concentric tubes.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 571-272-4790. The examiner can normally be reached on M-F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on 571-272-4930. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Teresa J. Walberg  
Primary Examiner  
Art Unit 3753

tjw